Amendments to the Claims

The following listing of the claims will replace all prior versions, and listings of the claims in the application:

Listing of Claims

1-10. (Canceled)

11. (Currently Amended) ~~The optical disc controller according to claim 8, further comprising~~ An optical disc controller for servo-controlling an optical head, a disc motor, and a light beam in an optical disc device comprising the disc motor and the optical head, the disc motor rotating an optical disc, the optical head emitting a light beam for recording data on the optical disc and/or reproducing data from the optical disc, the optical disc controller, comprising:

an interrupt signal generating section for generating an interrupt signal in each one of a plurality of predetermined time periods, and

a control section which receives a digital signal indicating a current state or a deviation from a target value from the optical head and the disc motor of the optical disc device and performs a plurality of operations according to the digital signal so as to obtain and output a control signal indicating a control amount, and

an input/output section which receives ~~the~~ an electric signal, converts the electric signal into ~~a~~ the digital signal, outputs the digital signal to the control section, receives a control signal from the control section, converts the control signal into an analog signal, and outputs the analog signal to the optical head and the disc motor, wherein

(a) the control section performs the plurality of operations every time the interrupt signal is received from the interrupt signal generating section,

(b) the control section stops operating and goes into a sleep mode at least for a predetermined time period between reception of the interrupt signal and reception of a subsequent interrupt signal,

(c) the control section receives the ~~electric~~ digital signal and outputs the control signal ~~in~~ for each of the operations,

(d) the control section goes into the sleep mode after performing one of the operations ~~so as to output the control signal to the input/output section~~, and

(e) the control section resumes operation from the sleep mode ~~after the input/output section receives an electric signal for a subsequent operation and completes~~ several clocks before completion of conversion of the electric signal to ~~a~~ the digital signal after the input/output section receives the electric signal for a subsequent operation.

12. (Currently Amended) ~~The optical disc controller according to claim 8, further comprising~~ An optical disc controller for servo-controlling an optical head, a disc motor, and a light beam in an optical disc device comprising the disc motor and the optical head, the disc motor rotating an optical disc, the optical head emitting a light beam for recording data on the optical disc and/or reproducing data from the optical disc, the optical disc controller, comprising:

an interrupt signal generating section for generating an interrupt signal in each of a plurality of first predetermined time periods, and

a control section which receives digital signal indicating a current state or a deviation from a target value from the optical head and the disc motor of the optical disc device and performs a plurality of operations according to the digital signal so as to obtain and output a control signal indicating a control amount, and

an input/output section which receives ~~the~~ an electric signal, converts the electric signal into a the digital signal, outputs the digital signal to the control section, receives a control signal from the control section, converts the control signal into an analog signal, and outputs the analog signal to the optical head and the disc motor, wherein

(a) the control section performs the plurality of operations every time the interrupt signal is received from the interrupt signal generating section,

(b) the control section stops operating and goes into a sleep mode at least for a predetermined time period between reception of the interrupt signal and reception of a subsequent interrupt signal,

(c) the control section receives the ~~electric~~ digital signal and outputs the control signal ~~in~~ for each of the operations,

(d) the control section goes into the sleep mode for a second predetermined time period after performing one of the operations so as to output the control signal to the input/output section, and

(e) the control section resumes operation from the sleep mode after a lapse of the second predetermined time period.

13-16. (Canceled)

17. (Currently Amended) ~~The optical disc device according to claim 14, further comprising~~ An optical disc device, comprising:

an optical head which emits a light beam to an optical disc having a track for recording data, the optical head including a converting section which converts, into an electric signal, light reflected from the optical disc or light transmitted through the optical disc, a focus actuator for moving a focus of the light beam perpendicularly to a data surface of the optical disc, and a tracking actuator for moving the light beam in a radius direction of the optical disc,

a disc motor for rotating the optical disc,

an interrupt signal generating section for generating an interrupt signal in each of a plurality of predetermined time periods, and

a control section which receives a digital signal indicating a current state or a deviation from a target value from the optical head and the disc motor and performs an operation according to the digital signal so as to obtain and output a control signal indicating a control amount, and

an input/output section which receives ~~the~~ an electric signal, converts the electric signal into a digital signal, outputs the digital signal to the control section, receives a control signal from the control section, converts the control signal into an analog signal, and outputs the analog signal to the optical head and the disc motor, wherein

(a) the control section performs the plurality of operations every time the interrupt signal is received from the interrupt signal generating section,

(b) the control section stops operating and goes into a sleep mode at least for a predetermined time period between reception of the interrupt signal and reception of a subsequent interrupt signal,

(c) the control section receives the electric signal and outputs the control signal in each of the operations,

(d) the control section goes into the sleep mode after performing one of the operations ~~so as to output the control signal to the input/output section~~, and

(e) the control section resumes operation from the sleep mode ~~after the input/output section receives an electric signal for a subsequent operation and completes~~ several clocks before completion of conversion of the electric signal into a the digital signal after the input/output section receives the electric signal for a subsequent operation.

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18. (Currently Amended) ~~The optical disc device according to claim 15, further comprising~~ An optical disc device, comprising:

an optical head which emits a light beam to an optical disc having a track for recording data, the optical head including a converting section which converts, into an electric signal, light reflected from the optical disc or light transmitted through the optical disc, a focus actuator for moving a focus of the light beam perpendicularly to a data surface of the optical disc, and a tracking actuator for moving the light beam in a radius direction of the optical disc,

a disc motor for rotating the optical disc,

an interrupt signal generating section for generating an interrupt signal in each of a plurality of first predetermined time periods, and

a control section which receives a digital signal indicating a current state or a deviation from a target value from the optical head and the disc motor and performs an operation according to the digital signal so as to obtain and output a control signal indicating a control amount, and

an input/output section which receives ~~the~~ an electric signal, converts the electric signal into a the digital signal, outputs the digital signal to the control section, receives a control signal from the control section, converts the control signal into an analog signal, and outputs the analog signal to the optical head and the disc motor, wherein

(a) the control section performs the plurality of operations every time the interrupt signal is received from the interrupt signal generating section,

(b) the control section stops operating and goes into a sleep mode at least for a predetermined time period between reception of the interrupt signal and reception of a subsequent interrupt signal,

(c) the control section receives the ~~electric~~ digital signal and outputs the control signal in each of the operations,

(d) the control section goes into the sleep mode for a second predetermined time period after performing one of the operations so as to output the control signal to the input/output section, and

(e) the control section resumes operation from the sleep mode after a lapse of the second predetermined time period.

19-23. (Canceled)